DOCUMENT RESUME

ED 095 396 CE 001 963

AUTHOR	Beusse, William E.
TITLE	In-Service and Post-Service Benefits of GED Program Participation.
INSTITUTION	Air Force Human Resources Lab., Alexandria, Va. Manpower Development Div.
SPONS AGENCY	Office of the Assistant Secretary of Defense for Manpower and Reserve Affairs (DOD), Washington, D.C. Directorate for Manpower Research.
REPORT NO	AFHRL-TR-73-65; OASD/M&RA-MR-73-3
PUB DATE	Dec 72
NOTE	40p.
EDRS PRICE	MF-$0.75 HC-$1.85 PLUS POSTAGE
DESCRIPTORS	Credentials; *Educational Certificates; *Equivalency Tests; *Military Personnel; Military Service; *Rewards; Salaries; *Salary Differentials; Tables (Data); Veterans

ABSTRACT

This study analyzes the benefits which accrue to servicemen who participate in and pass the GED equivalency tests. Achievement of GED equivalency was found to result in tangible benefits for the individual, both while in the service and in civilian life. GED recipients attained higher pay grades than those who did not receive equivalency certification. In civilian life, GED recipients were more likely to be employed in higher paying, more prestigious occupations. Also, GED holders had higher mean weekly earnings than non-high school graduates without a GED. Receipt of an official State certificate was found to increase the level of benefits which the individual received in civilian life. (Author)

ED 095396

Report MR 73-3

MANPOWER DEVELOPMENT RESEARCH PROGRAM

In-Service and Post-Service Benefits of GED Program Participation

Manpower Development Division
Air Force Human Research Laboratory

Approved for public release; distribution unlimited.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

READ 1963

Sponsored by

Office of Assistant Secretary of Defense
Manpower and Reserve Affairs
Directorate for Manpower Research

IN-SERVICE AND POST-SERVICE BENEFITS OF GED PROGRAM PARTICIPATION

William E. Beusse
Manpower Development Division
Air Force Human Resources Laboratory
Air Force Systems Command
Alexandria, Virginia 22314

Approved for public release; distribution unlimited.

This study was conducted in cooperation with the Directorate of Education Programs and Management Training, OASD (M&RA).

TABLE OF CONTENTS

Executive Summary 1

Introduction 5

Problem and Objectives

Method

Selected Review of Literature on Benefits of Educational Attainment 8

In-Service Benefits of GED Participation 11

Post-Service Benefits of GED Participation.....15

Job Hunting Behavior 30

Bibliography 33

Section I

EXECUTIVE SUMMARY

The intent of this study was to analyze the benefits resulting from GED participation. Both in-service and post-service benefits were considered.

Achievement of GED equivalency was found to result in tangible benefits for the individual while in the military service. Even when aptitude and number of months of active military service are controlled, GED recipients attained significantly higher pay grades than individuals who failed the tests or did not participate. Although this study was unable to measure directly such possible benefits as eligibility for training, assignments, or reenlistment, the survey included questions pertaining to the individual's perceptions of benefits in these areas. Servicemen who passed the GED tests at only the GOD level were more likely to report that the GED helped them while in the service than men who also passed at the higher levels required by their states.

Attainment of GED equivalency was also found to have a significant impact in the post-service life of the veteran. GED recipients were more likely to be employed in higher paying, more prestigious occupations than non-high school graduates who did not receive GED certification. Also, the mean weekly earnings of successful GED participants were found to be significantly higher than those of individuals who failed or did not participate. In addition, the state employment offices were more successful in finding jobs for GED holders than for non-high school graduates without equivalency certificates. Contrary to expectations GED holders did not

seem to experience greater ease in obtaining employment than individuals without high school certification. Recipients of GED equivalency were found to have higher unemployment rates and have a lower "ratio of jobs held to jobs applied for" than non-GED holders. However, these findings are attributed to the GED holders seeking employment in higher level occupations where they are still somewhat at a disadvantage in competing with traditional high school graduates.

GED certification was also found to have an impact upon post-service educational activities. A higher percentage of GED holders enrolled in a school or formal training program than non-GED holders. Also, of those veterans who continued their formal education after separation from the service, GED holders were more likely to have enrolled in some form of higher education (Junior College or Four Year College) than veterans without high school certification.

In addition, this study sought to determine what benefits the GED holders feel their high school equivalency has brought them in their post-service life. They reported a higher level of overall benefits than benefits from any of the specific areas. Of the specific areas, GED certification was seen as being the most help in getting into school or training programs or getting a job. Getting promoted is the post-service area in which these veterans see their educational credentials as being the least help.

An important aspect of this study was to determine the impact of

different cut-off scores recognized by DOD and the state educational agencies as standards for successful achievement on the tests. The different success criteria had no effect upon the pay grade a serviceman achieved. In post-service life, achievement of state certification was found to have a strong effect upon the level of benefits received by the GED holder. Those veterans who received an official state certificate were more likely to obtain employment in professional, managerial, and technical occupations than those who did not receive state certification. State certificate holders were also found to have; (1) higher weekly earnings, (2) more success in finding employment through the state employment service, (3) more success in having the certificates accepted by educational programs, and (4) perceived a higher level of resulting benefits than GED holders without state certification.

In general, the data indicate the existence of a "credentials effect." GED holders were found to attain a higher level of success in military and post-service life than high school graduates without GED equivalency. Also, recipients of official state certificates tend to do better in civilian life than GED holders without state certification.

This study also investigated several aspects of veterans' job hunting activities. It was found that only about one quarter of the GED holders bring their GED certificates to employment interviews, whereas about two-thirds take their separation papers (DD214) with them when applying for jobs. Also, twice as many respondents reported being asked to show separation papers than reported being asked to show a high school diploma. Thus, a very important aspect of the GED program involves

making sure that successful achievement on the tests is recorded on the serviceman's records.

In conclusion, the positive relationship between educational credentials and attainment of success in both military and civilian life indicates the importance of the high school equivalency program. The USAFI GED program is performing a valuable service by providing non-high school graduate servicemen with the opportunity to obtain high school equivalency. These high school GED credentials have the potential to yield tangible benefits to the individual either as a career serviceman or a civilian.

Section II

INTRODUCTION

PROBLEM AND OBJECTIVES

The general purpose of this report is to analyze the benefits which accrue to servicemen who participate and pass the GED equivalency tests. This study considers both in-service and post-service benefits.

Over the years the military departments have evolved a number of education and training programs for military personnel. These programs were designed to meet military requirements for increased technical competence and to accomodate the self-development aspirations of a large segment of the service population. Today, these programs have become an increasingly important part of the services' manpower development efforts since military specialties are becoming more technical. Also, as the movement toward an all volunteer force has progressed, the military services have found that the oppoutunity for education or training is an important incentive to voluntary enlistment.

One of the largest educational programs offered to servicemen by the Department of Defense (DOD) is the High School General Educational Development (GED) testing program administered by the United States Armed Forces Institute (USAFI). Several million military personnel have attained high school equivalency by successfully passing the battery of high school GED tests while in the military service. However, little is known about the benefits which accrue to the participants of the GED program.

One complicating factor in analyzing the relationship between achievement of GED equivalency and post-service benefits is the different cut-off scores recognized by DOD and the state educational agencies standards for successful achievement on the tests. In most cases the states require higher scores than does DOD (CASE, 1972). Thus, some of the successful participants qualify only at the DOD level while others qualify at both the DOD and state levels. A major concern of this study is to determine the impact of these different criteria upon the benefits resulting from the GED program.

METHOD

The data for this analysis were gathered through use of a survey questionnaire mailed to a sample of former Army personnel. Utilizing information contained in the DOD Post-Service Information File and the USAFI Student Master File (Central AVF Task Force, 1972), a stratified random sample of 1,000 recent Army separatees was selected from each of the following populations:

1. men who had passed the GED tests at both the DOD recommended level and the level required by their home states (STATE group),

2. men who passed the GED tests at the DOD level only (DOD group),

3. men who participated in the GED program but failed (FAILS group), and

4. non-high school graduates who did not participate in the GED program (NPART group).

Table 1 shows the distribution of returns resulting from the initial mailing and a follow-up mailing.

Table 1

QUESTIONNAIRE RETURNS

Group	Number of Questionnaires Mailed	Number of Undeliverable Questionnaires	Number of Completed Questionnaires	Percent of Useable Returns
STATE	1000	39	668	67%
DOD	1000	54	556	56
FAILS	1000	60	515	52
NPART	1000	68	509	51

In addition, a sample of recent Army separatees, who were high school graduates (HSG) at time of entry into the service, was selected for comparative purposes. The data on this group was extracted from the DOD Post-Service Information File.

Section III

SELECTED REVIEW OF LITERATURE ON BENEFITS OF EDUCATIONAL ATTAINMENT

It has been accepted, as an article of faith, that education results in tangible benefits for the individual. Empirical research that has been done generally supports this belief.

The main focus of research concerning the relationship between education and benefits has been in the area of occupational mobility. Studies in this area indicate that educational level has a strong influence on vertical mobility. Centers (1949) found that when a son attains a higher educational level than his father, his occupational attainment will also tend to be higher. Glick (1954) found similar results.

Blau and Duncan (1967) made a comprehensive study of the relationship between education and occupation. Their data shows that upward mobility is directly related to education (r= .596). Approximately 28% of the high school graduates in their study exhibited high upward mobility compared to only 18% of those who completed only 1 to 3 years of high school.

Data from the 1970 Census also indicate that there is a direct relationship between median years of school completed by workers in the ten major occupational classes and the hierarchical ranking of these classes according to relative prestige.

An attempt to measure quantitatively the benefits resulting from educational attainment was made by Glick and Miller (1956). They found that over a lifetime, a college graduate will earn over twice the amount of income of an individual with only eight years of school and about 1 3/4

times the earnings of a high school graduate.

Recent census data also indicates a positive relationship between education and income. The 1970 census found that the median annual earnings of males with 1 - 3 years of high school was only $6472 compared to $7050 for high school graduates.

The work of many other researchers who have also found occupational success to be directly related to educational attainment demonstrates the stability and consistency of the relationship (Blum and Coleman, 1970; Berg, 1970; Berg, 1968; etc.). However, there is some question as to whether there is a direct relationship between educational attainment and ability to perform (Wiener, 1968).

Statistics compiled by the U.S. Bureau of the Census indicate that the educational level of the population has been increasing steadily. This rise in the educational level of the populace has been accompanied by an increase in the complexity of many jobs. These developments have influenced many employers to specify a high school education as a requirement for employment, even for semi-skilled and low skilled jobs. The result has been that the non-high school graduate has been placed in a disadvantaged position in the labor market.

Thus, the results may not be caused exclusively by the ability of more highly educated workers to perform better. A 'credentials effect' may also be a factor. That is, there is a possibility that differences in opportunities are attributable not to differences in actual performance ability but rather to barriers set up by an individual's lack of credentials. Recent research indicates that educational attainment beyond the minimum

level necessary for basic comprehension and communication has little or no effect on job performance. Diamond and Bedrosian (1970) conducted a study of ten major entry and near-entry level occupations in the New York and St. Louis areas. They found that employer hiring requirements and preferences were generally overstated. In particular, they noted that: "In seventeen out of twenty occupation-industry groups, years of schooling were unrelated to measures of job performance, (p.9)."

Based upon the research reviewed above, it is expected that the attainment of GED equivalency will result in measureable benefits for the individual. While the man is in the service, it is expected that receipt of GED equivalency would enable him to attain a higher pay grade and become eligible for assignments and training which require higher levels of education. After separation from the service, a veteran who has received GED equivalency should be able to obtain a better job and higher earnings than a veteran without a GED certificate.

In order to try to isolate the "credentials effect," this study attempts to control other factors (i.e., aptitude) which would also be expected to have an effect upon the degree of success an individual attains in military and civilian life.

Section IV

IN-SERVICE BENEFITS OF GED PARTICIPATION

The military, like all organizations, attempts to promote its most qualified personnel. Therefore, one possible benefit of educational attainment is more rapid advancement. There are several factors which influence promotions in the military service. Aside from performance, such factors as career field and length of service also have an effect . In attempting to isolate and measure the impact of GED participation upon military promotions, it is desirable to control for as many of these factors as possible. Analysis of covariance was selected as the appropriate statistical technique because it enables us to control for additional factors and isolate the effects of a particular variable.

This analysis utilized the BMD analysis of covariance program, BMD04V (Dixon, 1971). This program is designed to compute analysis-of covariance with multiple covariates for groups of unequal sizes. The covariates used in this analysis were AFQT score and number of months of total active federal military service (TAFMS). AFQT was selected as a covariate because of the strong relationship between AFQT and military occupation assignments. Also, controlling for AFQT allows us to factor out the aptitude component of performance. The selection of TAFMS as a second covariate allows us to control for differences in length of service. The results of this analysis are shown in Table 2.

Table 2

ANALYSIS-OF-COVARIANCE
PAY GRADE AT SEPARATION CONTROLLING FOR AFQT AND TAFMS

Group	Adjusted Group Mean
HSG	4.41
STATE	4.27
DOD	4.31
FAILS	4.13
NPART	4.10
TOTAL	4.27

$F(4,8817) = 56.3$, $p < .001$

The results shown in Table 2 indicate that educational credentials do have an impact upon promotion. The average pay grade achieved by successful GED participants (approximately 4.3) is significantly higher than that achieved by unsuccessful participants and non-participants (approximately 4.1) and lower than the average pay grade achieved by high school graduates (approximately 4.4). The relatively better showing of traditional high school credentials were recorded at entry whereas GED equivalency was not recorded until sometime during the serviceman's tour of duty. The difference may also be due to the fact that non-high school graduates tend to have more disciplinary problems than high school graduates.

A partial correlation analysis, controlling for AFQT and TAFMS, confirmed that educational credentials have a significant effect upon the pay grade a serviceman achieves.

Another area of possible benefits resulting from educational attainment is eligibility for certain training courses and occupational assignments. The present study, however, was not able to investigate this area. As has been mentioned previously, this study surveyed first-term personnel.

only. Harding and Richards (1971) report that assignments are made fairly early in a recruit's military career. Thus, it is doubtful that information updating an individual's records to show GED equivalency attainment could enter the system in time to have an impact on the assignment process of one-term personnel.

Since it was known that this study would be unable to measure directly such possible benefits as eligibility for training, assignments, or reenlistment, the survey included questions pertaining to the individual's perceptions of benefits in these areas. Respondents were asked to indicate how much they felt achievement of the GED has helped them in certain areas of the military career. These results are shown in Table 3.

The results shown in Table 3 indicate that servicemen who pass the GED tests at only the DOD level are more likely to report that the GED helped them while in the service than men who also passed at the state level. This pattern appears in each of the five areas of benefits listed; overall, promotions, eligibility for reenlistment, assignments to schools, and performance of military occupations.

It is interesting to note that a larger percentage of respondents in each group report a higher level of overall benefits received than for any specific area. There are two possible explanations for this. First, the high level of overall benefit may be due to some other specific benefit or some general personal benefit which was overlooked by the questionnaire. Or, the higher level of perceived general benefit may be due to a cumulative effect of a serviceman perceiving a moderate degree of benefit in several specific areas.

Table 3

PERCEPTIONS OF IN-SERVICE BENEFITS

	Percent of Respondents	
	STATE	DOD
Do you feel that the GED helped you while you were in the service....		
Overall?		
Very Much	22%	30%
Somewhat	37	48
Not at All	41	22
In Getting Promoted?		
Very Much	15	21
Somewhat	22	37
Not at All	63	42
In Eligibility for Reenlistment?		
Very Much	10	11
Somewhat	23	23
Not at All	67	66
In Getting Assigned to Schools?		
Very Much	12	11
Somewhat	16	22
Not at All	72	67
In Performing Your Military Occupation?		
Very Much	8	13
Somewhat	19	29
Not at All	73	58

Section V

POST-SERVICE BENEFITS OF GED PARTICIPATION

Since alternative selection criteria (such as performance on aptitude tests) are not as widespread in the civilian sector as they are in the military, attainment of educational credentials may be more critical in civilian life than in military life. Employment is one area where educational credentials would be expected to have a strong impact. More specifically, it would be expected that the higher an individual's educational attainment; (a) the better the job he will seek, (b) the better the job he will be able to obtain, (c) the higher his earnings will be, and (d) the easier it wil be for him to find a job.

Respondents' civilian occupations were analyzed and classified under the one digit Dictionary of Occupational Titles (DOT) categories. Table 4 shows the distribution of occupations by group.

Table 4

CIVILIAN OCCUPATIONAL GROUPS
(One Digit DOT Categories)

	Percent of Respondents				
	HSG	STATE	DOD	FAILS	NPART
Professional, Managerial, Technical (0 & 1)	21%	17%	11%	13%	14%
Clerical and Sales (2)	15	14	13	9	8
Service Occupations(3)	7	7	6	5	6
Farming, Fishing, Forestry (4)	2	1	3	2	2
Processing Occupations (5)	4	3	4	8	8
Machine Trades Occupations (6)	15	14	19	17	13
Bench Work Occupations (7)	4	5	6	4	5
Structural Work Occupations (8)	18	22	17	22	22
Miscellaneous Occupations (9)	14	17	21	20	22

The results shown in Table 4 indicate that veterans with higher educational credentials tend to find employment in different occupations than veterans with lower educational attainment. Generally, the higher an individual's educational credentials the more likely he is to be employed in professional, managerial, technical, clerical, sales, and service occupations and the less likely he is to be employed in farming, fishing, forestry, processing and miscellaneous occupations.

A major issue concerns the effect of different state requirements for issuance of official state equivalency certificates upon potential benefits. It was found that veterans with official state certificates were slightly more likely to have obtained employment in professional, managerial, and technical occupations than are those who did not receive state certification. In general, however, receipt of an official state certificate did not seem to have a large impact upon the veteran's occupation.

The occupations which veterans with higher educational credentials tend to obtain are those which are generally higher in prestige, using the rankings developed by Reiss (1961). This also seems to be true for those veterans who have received state GED certificates. It thus appears that obtaining GED equivalency opens the door to occupations which may have previously been blocked to applicants lacking a high school diploma.

These findings generally confirm the expectation that veterans with higher educational levels will seek and obtain employment in higher paying, more prestigious occupations than veterans with lower educational attainments.

Income from employment is a second area of potential post-service benefits to former servicemen who achieved GED equivalency. It is likely that earnings are affected by a number of different variables. Several steps were taken to try to isolate the effect of educational attainment. First, only veterans reporting they were employed full-time were considered. Also, differences among groups were analyzed using an analysis-of-covariance model. Since all respondents in the research sample were separated from the Army for approximately ten months before DOD Post-Service survey time, control of seniority was not considered necessary. However, since it was felt that aptitude is likely to have an effect upon earnings, AFQT was utilized as a covariate. The results of this analysis are shown in Table 5.

Table 5

ANALYSIS OF COVARIANCE
WEEKLY EARNINGS CONTROLLING FOR AFQT

Group	Adjusted Group Mean
HSG	$131.50
STATE	136.37
DOD	126.74
FAILS	120.23
NPART	119.53
TOTAL	$126.84

$F(4, 6818) = 32.10, p < .001$

The results shown in Table 5 indicate that earnings are directly related to educational credentials. The mean weekly earnings of successful GED participants ($126.74 for DOD group and $136.37 for STATE group) are significantly higher than those of unsuccessful participants ($120.23) or non-high school graduate non-participants ($119.53).

An interesting result is that the mean weekly earnings of GED participants who pass at the state levels are higher than those of traditional high school graduates. One possible reason for this finding is that high school graduates are a very diverse group. There is a great deal of heterogeneity among the abilities of graduates of different high schools. The existence of high school graduates of low ability may cause the mean earnings of the high school graduate group to appear lower. Higher motivation may be another possible reason for higher earnings of the STATE group. The prevailing view has been that non-high school graduates (or dropouts as they are often called) are lacking in initiative, emotional stability, and perseverance. However, as Wiener (1968) points out, many of the so-called dropouts would be better characterized by the term "push-outs." That is, many non-graduates fail to complete high school for reasons other than lack of ability or motivation. Economic and family problems sometimes leave very few alternatives to dropping out. Recent research by Bachman, Green and Wirtanen (1971) indicates that dropouts who later complete their education are qualitatively different from those who do not. As Bachman et al state:

> "The dropouts who later gained diplomas showed some signs of moderate 'improvement' along a number of dimensions: self-esteem, negative affective states, happiness, physical symptoms, needs for self-development and self-utilization, social values, and ambitious job attitudes (p. 227)."

A study by Devlin (1970) also implies that individuals who complete their schooling through an adult education program may exhibit a higher level of motivation than high school graduates in their age group. Thus, rather than being characterized by low motivation (as the prevailing

wisdom assumes about non-high school graduates), the GED participant may be characterized by above-normal motivation which may also manifest itself in above-average earnings.

Also in the area of employment, higher educational credentials could be expected to make it easier for veterans to find employment. There were several questions pertaining to this hypothesis. Respondents were asked how many jobs they had applied for since leaving the service, how many jobs they had held, and how many weeks of unemployment payments they had received.

Doeringer (1969) notes that labor markets operate according to "queuing" principles. That is, employers hire the most productive workers first, leaving the less productive workers unemployed. Therefore, because of the tendency for employers to use education as proxy measure of potential productivity, veterans with higher educational attainments should have lower unemployment rates.

Table 6

UNEMPLOYMENT AND EDUCATIONAL CREDENTIALS

	STATE	DOD	FAILS	NPART
Percent of group who received unemployment payments*	59%	57%	55%	54%
Mean number of weeks of unemployment payments** (includes only those individuals who received unemployment)	16.8	15.8	17.0	15.3

*chi square = 7.21, $p < .07$
**F = 1.98, NS

Contrary to expectations, a larger percentage of those veterans with higher educational attainments had received unemployment payments

than veterans with lower educational levels (Table 6). Also, there was no significant difference found among the mean number of payments received. When the analysis was based on whether or not the respondent received a state certificate, no difference was found on either the percent receiving unemployment or the average number of weeks unemployment payments were collected.

Respondents were also asked whether they obtained a job through the unemployment office (Table 7).

Table 7

JOBS OBTAINED THROUGH UNEMPLOYMENT OFFICE

	Percent Responding "Yes"				
	STATE (Received)	STATE (Qualified)	DOD	FAILS	NPART
Did you get a job through your visits to the unemployment office?*	20%	18%	18%	13%	15%

$x^2 = 15.34$, $p < .001$

*Includes only those individuals who visited a state unemployment office.

The responses indicate that state unemployment offices have significantly more success in placing veterans with higher educational attainments. The fact that 20% of those veterans who received official state certificates found jobs through the unemployment service provides further support for this contention.

Another measure of the practical use of educational credentials is the help they give in obtaining employment. Again, due to the queue-like

nature of the labor market, veterans with higher educational attainments should experience greater ease in securing employment. More specifically, they would be expected to get a job without having to apply for as many jobs as individuals with lower educational attainments. Table 8 shows some analysis-of-covariance data (controlling for AFQT) relevant to these expectations.

Table 8

VARIABLES RELATED TO EASE OF OBTAINING EMPLOYMENT
BY EDUCATIONAL CREDENTIALS GROUP

	Group Means				F	Signifi-
	STATE	DOD	FAILS	NPART	Value	cance
Number of Jobs Applied For	5.59	7.03	6.02	4.12	14.56	.01
Number of Jobs Held	2.16	2.14	2.23	2.08	1.93	NS
Ratio of Jobs Held to Jobs Applied For	.39	.30	.37	.50	11.43	.01

Although the number of jobs held did not vary much across groups, the number of jobs applied for showed a great deal of variance. Veterans who passed the GED tests at the DOD level applied for the most jobs whereas non-participants applied for the fewest. The ratio of jobs held to jobs applied for may indicate that those veterans who passed the GED tests experienced more difficulty in obtaining employment than those with lesser qualifications. Another possible interpretation is that individuals who take the GED tests are more ambitious and therefore apply for more jobs.

These findings pertaining to unemployment and ease of obtaining employment were contrary to expectations. Rather than having less difficulty in the civilian job market, veterans with higher educational credentials seemed to fare no better and in some respects worse than individuals with lesser

educational attainments. However, there is reason to believe that the job hunting activities of these groups may not be comparable (i.e., the various groups may be looking for work in different job markets). The findings of Bachman, Green and Wirtanen (1971) provide some evidence for this interpretation. In their study of dropouts they found that 32 respondents had obtained diplomas of some type after having dropped out. These "dropouts with diplomas" exhibited a distinctive increase in their occupational aspirations following receipt of their diplomas. Thus the GED program may have acted to increase the aspirations of successful participants to a point where they are competing for higher level jobs against traditional high school graduates. Further support for this explanation is provided by the current study. As was previously noted, veterans with better educational credentials tend to find (and therefore presumably look for) employment in different occupations (those which are higher paying and have higher status rankings) than veterans with lesser educational credentials.

Post-service education is another major area of potential benefit to successful GED participants. Since almost all formal educational institutions and many training programs require educational credentials to be submitted, this is an area where GED participation can aid the former serviceman. Table 9 shows the percent of veterans in each group who had enrolled in some sort of school or training program since leaving the service.

Table 9

QUESTIONS RELATED TO POST-SERVICE EDUCATION

	Percent Responding "Yes"			
	STATE	DOD	FAILS	NPART
Are you enrolled or have you been enrolled in a school or formal training program since leaving the service?	46%	38%	36%	34%
Was your USAFI Certificate accepted?*	79	64	NA	NA
Was your State Certificate accepted?*	85	NA	NA	NA
Have you used or are you using the educational benefits provided by the GI Bill?	40	30	26	22

*Includes only those servicemen who have that particular credential

As would be expected, the higher a veteran's educational attainments, the more likely he is to enroll in some form of post-service education or training program.

Caution should be observed in analyzing the responses to questions concerning acceptance of certificates. It is possible that an individual with a GED certificate could be rejected by an educational or training institution on some other grounds and yet the individual might attribute his rejection to non-acceptance of his certificate. With this caveat in mind, the results indicate that the higher the level of recognition (STATE vs. DOD), the more likely that the veteran's certificate will be accepted. Also, state issued certificates are more likely to be accepted than USAFI certificates.

Since use of GI Bill education benefits is a direct function of the

number of veterans enrolled in educational or training programs, it comes as no surprise that the higher an individual's educational attainment the more likely he is to utilize GE Bill educational benefits.

The kind of educational or training program the veteran enters also varies with the individual's educational attainment. Table 10 gives the distribution of program types by group for those veterans who reported post-service enrollment.

Table 10

TYPES OF POST-SERVICE EDUCATION OR TRAINING PROGRAMS*

	Percent of Respondents				
Type of School or Training	HSG	STATE	DOD	FAILS	NPART
High School	--%	8%	22%	33%	20%
Junior College	31	26	14	2	6
Four Year College	16	9	2	2	5
Trade or Technical School	18	33	41	42	38
Formal Training Program	21	12	10	7	9
Other	14	12	11	14	22

*Data on the HSG group was collected by the DOD Post-Service Survey, while data reported on the other groups was collected by the present survey.

The information in Table 10 indicates that there is a great deal of variation in the types of programs various group members select. Many of the individuals who failed the GED tests enroll in some type of high school program after separation. Their nearness to completion may be a strong factor. Those members of the STATE and DOD groups who report participation in high school programs are most likely trying to meet the requirements of their state for an official high school equivalency certificate. The fact that approximately 20% of the GED non-participants report

post-service enrollment in a high school program raises the question of why they did not participate in the GED program while they were in the service.

Generally speaking, the higher the veteran's education credentials, the more likely he is to enroll in some form of higher education (Junior College or Four Year College). The higher education categories account for 47% of the high school graduates, 35% of the veterans who passed the GED at the level required by their state, 16% of the veterans who passed the GED at only the DOD recommended level, 4% of those who failed the GED tests, and 11% of the non-participants. Self-selection of educational programs and institutional selection procedures are probably jointly responsible for this relationship. An interesting finding was the surprisingly high percentage of GED non-participants enrolled in higher education. This may be an indication that a good number of non-high school graduates are picking up high school credentials on their own. Also, many community colleges and technical schools have changed their entrance requirements to allow individuals of adult age to enter without high school credentials.

The largest percentage of veterans in each of the non-high school graduate accession groups was found to be enrolled in trade or technical schools. Since these schools do not normally have rigorous entrance requirements, the absence of a large difference across groups is not surprising. The lower percentage of STATE and HSG veterans enrolling in trade programs is an additional indication that the occupational aspirations of these groups is different from the other groups.

The positive relationship between participation in formal training programs and educational credentials is probably the result of institutional selection procedures which utilize educational credentials as a criterion.

Participation in the GED program is also likely to affect the veteran's future educational plans. One reason for this expectation is that the plans of successful GED participants are less likely to be blocked by lack of a high school diploma. Also, nearness to the high school equivalence goal may spur those former servicemen who failed the GED to continue to pursue it after separation. Respondents were asked whether or not they planned to continue their formal education. The distribution of responses appears in Table 11.

Table 11

EDUCATIONAL PLANS

	STATE	DOD	FAILS	NPART
Plan to continue education	51%	43%	51%	46%
Uncertain	35	42	39	34
Don't plan to continue education	14	15	10	20

As with all questions inquiring into future plans, caution must be taken in interpreting the results. There is always a tendency to fantasize with respect to future goals. The responses to this question indicate that the educational aspirations of these veterans are fairly good. Relatively few respondents in any of the groups report that they have no plans to continue their formal education. The FAILS group shows the lowest percentage of respondents with no plans to continue. For some members of this group, this may be an indication that because they

are so close they will seek to acquire their high school equivalency. The fact that over 46% of the GED non-participants state that they plan to continue their formal education again raises the question of why they did not participate in the GED program while in the service. Of those veterans who received an official state certificate, 58% plan to continue their education as opposed to only 44% of those who qualified for but did not receive state certificates. Thus, it may be that plans for additional formal education act to prompt veterans into converting their USAFI certification into official state certification.

This study also sought to determine what benefits the GED holders feel their high school equivalency has brought them. Respondents were asked to indicate how much they felt achievement of the GED has helped them in certain areas of civilian life. Since possession of an official state certificate is liable to have some bearing upon perceived benefits, the information in Table 12 is broken out by whether or not the veteran has received state certification.

The results shown in Table 12 indicate that those veterans who qualify for and receive state certification perceive a higher level of benefits resulting from their GED participation. This pattern appears for each of the specific areas. Getting promoted is the area for which these veterans see their educational credentials as being the least help. Again, as in the analysis of in-service benefits, the respondents report a higher level of overall benefits received than in any of the specific areas.

Table 12

PERCEPTIONS OF POST-SERVICE BENEFITS*

	Percent of Respondents	
	GED Holders Who Received An Official State Certificate	GED Holders Who Did Not Receive State Certification
Overall?		
Very Much	52%	35%
Somewhat	36	43
Not at All	12	22
In getting a job?		
Very Much	44	31
Somewhat	32	35
Not at All	24	34
In getting into school or training		
Very Much	47	35
Somewhat	26	24
Not at All	27	41
In getting promoted on the job?		
Very Much	24	18
Somewhat	21	22
Not at All	55	60

* Respondents who checked that a particular question did not apply to them have been excluded from this table.

It is interesting to note that all the respondents perceived a higher level of benefits in civilian life (Table 12) than in the military (Table 3). This, however, is understandable since all the respondents were servicemen who either chose to leave the service at the end of their first tour or were not selected for reenlistment. Thus, this finding may be the result of their rationalizing a preference for civilian life or their

lack of acceptance for military reenlistment.

Another interesting finding involves a reversal of the groups in their relative perceptions of benefits in the military and in civilian life. The DOD group perceived higher resultant benefits in the military than the STATE group (Table 3). However, in civilian life, those veterans who received state certificates perceived higher benefits than those who did not receive state certificates (Table 12). One possible explanation may be that passing the GED tests at the state level raises expectations to a level which the military cannot fulfill. Another possible explanation may be that the military does not discriminate between the different levels of success and both the STATE and DOD groups realize they are treated equally.

Section VI

JOB HUNTING BEHAVIOR

Although the Department of Labor reports that the unemployment rate of Vietnam era veterans has declined steadily during the past year and is now only slightly higher than that of non-veterans in the same age group, (U.S. Department of Labor, 1972) the post-service employment of military separatees is a continuing concern of the Department of Defense. Thus, the survey instrument asked a number of questions concerning the activities of veterans in seeking employment.

Since there are no obvious outward signs of who is or who is not a high school graduate, effectiveness of an equivalency certificate program is partially dependent upon the visibility of educational credentials in the employment seeking process. Respondents were asked several questions to determine what credentials they took with them when applying for a job. Only data on respondents to whom the questions applied appear in Table 13 (i.e., respondents who reported having looked for work and having the credential in question).

Table 13

USE OF EDUCATIONAL CREDENTIALS

	Percent Responding "Yes"				
	STATE (Received)	STATE (Qualified)	DOD	FAILS	NPART
In looking for a job, did you?					
Take your USAFI Certificate	36%	27%	30%	NA	NA
Take your State Certificate	37	NA	NA	NA	NA
Take you DD 214 (Separation Papers)	66	68	68	60	52
Say you were a high school graduate	84	81	73	19	13

NA = Questions do not apply and were not asked

Most of the respondents in each of the four groups report taking their separation papers (Form DD 214) when applying for jobs. Also, it was found that about one third of the successful GED participants take their certificates with them. These results indicate that a veteran is more likely to take his separation papers to job interviews than his GED certificate. There are a number of possible reasons for this finding. During 1969 and 1970 the labor market was relatively tight. Also, draft calls during this period were still fairly high. Thus, employers faced with labor shortages may have been more concerned with an individual's draft status than his educational credentials. Also, the DD 214 contains the veteran's educational level as well as other information which might be of use to potential employers. Thus, the DD 214 might have been seen by veterans as more useful since it contains more information.

Another interesting finding shows that when looking for jobs, not all successful GED participants state they are high school graduates and a significant number of veterans who failed the GED or did not participate state that they are high school graduates. The fact that between 13% and 19% of the non-GED veterans can pass themselves off as high school graduates is testimony to loose screening methods used by some employers.

Those veterans who received official state certificates were more likely; (1) to take their certificates to employment interviews and (2) to say they are high school graduates.

The credentials an individual brings to a job interview are probably a function of what credentials he was asked for at previous job interviews. Therefore, several questions were asked concerning the documentation requested by potential employers. The results appear in Table 14.

Table 14

EMPLOYER REQUESTS FOR CREDENTIALS

When looking for a job were you asked...?	Percent Responding "Yes" STATE	DOD	FAILS	NPART
To show a diploma	25%	24%	22%	21%
To show a DD 214	53	55	46	41
To show a diploma to the unemployment office*	16	17	15	15

*Includes only those individuals who visited an unemployment office

As expected there is a congruence between the credentials asked for and those taken to job interviews. Since employers do not generally ask for a diploma, the diploma is not generally taken to job interviews. Also, since employers often ask to see separation papers, the veteran generally takes his Form DD 214 with him.

It is also interesting to note that requests for credentials generally increase as the individual's educational attainments increase (Table 14). This may be a further indication that veterans with higher educational credentials tend to apply for higher level jobs.

BIBLIOGRAPHY

Bachman, J. G., Green, S. and Wirtanen, I.D., Youth in Transition, Vol III, Dropping Out - Problem or Symptom?, Ann Arbor; Mich: Institute for Social Research, 1971.

Berg, I., "Education and Work," in E. Ginsberg (Ed.), Manpower Strategy for the Metropolis, New York: Columbia University Press, 1968.

Berg, I., Education and Jobs: The Great Training Robbery, New York: Praeger, 1970.

Blau, P.M. and Duncan, O.D., The American Occupational Structure, New York: Wiley, 1967.

Blum, Z.D. and Coleman, J.S., Longitudinal Effects of Education on the Incomes and Occupational Prestige of Blacks and Whites, The Johns Hopkins University: The Center for the Study of Social Organization of Schools, Report #70, June 1970.

Centers, R., "Education and Occupational Mobility," American Sociological Review, 14: 143-154, February 1949.

Central AVF Task Force, Inventory, Description, and Evaluation of the DOD Manpower Information System, OASD (M&RA), July, 1972.

Commission on Accreditation of Service Experiences (CASE), State Department of Education Policies, Washington, D.C. : American Council on Education, Bulletin #5, Eleventh Edition, June 1972.

Devlin, L.E., Participation in Adult Education and Occupational Mobility, (Doctoral Dissertation, University of Chicago), Springfield, Va.: National Technical Information Service, PB 193 587, 1970.

Diamond, E.E. and Bedrosian, H., Industry Hiring Requirements and the Employment of Disadvantaged Groups, (New York University School of Commerce), Springfield, Va.: National Technical Information Service, PB 191 278, 1970.

Dixon, W.J. (Ed.), BMD Biomedical Computer Programs #12, Berkely: University of California Press, 1971.

Doeringer, P.B., "Programs to Employ the Disadvantaged: A Labor Market Prospective, " in P.B. Doeringer (Ed.), Programs to Employ the Disadvantaged, Englewood Cliffs, N.J.: Prentice-Hall, 1969.

Glick, P.C., "Educational Attainment and Occupational Advancement," International Sociological Association, Transactions of the Second World Congress of Sociology, London: Hereford Times Ltd., 1954.

Glick, P.C. and Miller, H.P., "Educational Level and Potential Income," American Sociological Review, 21: 307-312, June 1956.

Harding, F.D. and Richards, J.A., "A Descriptive Analysis of the Classification, Assignment, and Separation Systems of the Armed Services," AFHRL-TR-71-15, 1971.

Reiss, A.J., Jr., Occupations and Social Status, Glencoe, Ill.: The Free Press, 1961.

U.S. Bureau of Census, Census of Population, 1970: United States Summary - Urban Areas, Washington, D.C.: U.S. Government Printing Office, 1972.

U.S. Department of Labor, Dictionary of Occupational Titles (DOT), Vols I, II, and III, Washington, D.C.: U.S. Government Printing Office, 1965.

U.S. Department of Labor, Employment and Earnings, Vol. 19, #4, October 1972.

Wiener, R., "Credentials and Common Sense: Jobs for People Without Diplomas," U.S. Department of Labor: Manpower Administration, Manpower Report #13, December, 1968.

UNCLASSIFIED
Security Classification

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY *(Corporate author)*
Air Force Human Resources Laboratory
Manpower Development Division
Alexandria, Virginia 22314

2a. REPORT SECURITY CLASSIFICATION
Unclassified

2b. GROUP

3. REPORT TITLE
In-Service and Post-Service Benefits of GED Program Participation

4. DESCRIPTIVE NOTES *(Type of report and inclusive dates)*

5. AUTHOR(S) *(First name, middle initial, last name)*
William E. Beusse

6. REPORT DATE	7a. TOTAL NO. OF PAGES	7b. NO. OF REFS
December 1972	34	20

8a. CONTRACT OR GRANT NO.	9a. ORIGINATOR'S REPORT NUMBER(S)
b. PROJECT NO. 4499	AFHRL/MD TRM-29
c. Task No. 449906	9b. OTHER REPORT NO(S) *(Any other numbers that may be assigned this report)*
d. Work Unit No. 44990642	OASD/M&RA MR 73-3

10. DISTRIBUTION STATEMENT
Approved for public release; distribution unlimited

11. SUPPLEMENTARY NOTES	12. SPONSORING MILITARY ACTIVITY
	Office of Assistant Secretary of Defense Manpower and Reserve Affairs Directorate for Manpower Research

13. ABSTRACT

This study analyzes the benefits which accrue to servicemen who participate in and pass the GED equivalency tests. Achievement of GED equivalency was found to result in tangible benefits for the individual, both while in the service and in civilian life. GED recipients attained higher pay grades than those who did not receive equivalency certification. In civilian life, GED recipients were more likely to be employed in higher paying, more prestigious occupations. Also, GED holders had higher mean weekly earnings than non-high school graduates without a GED. Receipt of an official State certificate was found to increase the level of benefits which the individual received in civilian life.

DD FORM 1 NOV 65 1473

UNCLASSIFIED
Security Classification

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

ERRATA
Supersedes DD Form 1473, dtd 1 Nov 1

REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER: OASD/M&RA MR 73-3 AFHRL TR 73-65	2. GOVT ACCESSION NO.
3. RECIPIENT'S CATALOG NUMBER	
4. TITLE (and Subtitle): IN-SERVICE AND POST-SERVICE BENEFITS OF GED PROGRAM PARTICIPATION	5. TYPE OF REPORT & PERIOD COVERED: Memorandum
	6. PERFORMING ORG. REPORT NUMBER: AFHRL TR-73-65
7. AUTHOR(s): Beusse, William E.	8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS: Air Force Human Resources Laboratory Manpower Development Division Alexandria, Virginia 22314	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS: PE 62703F Project 4499-06-42
11. CONTROLLING OFFICE NAME AND ADDRESS: Office of the Assistant Secretary of Defense (Manpower and Reserve Affairs) Directorate of Manpower Research Washington, D.C. 20301	12. REPORT DATE: December 1972 13. NUMBER OF PAGES: 34
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)	15. SECURITY CLASS. (of this report): UNCLASSIFIED 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for Public Release; Distribution Unlimited.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

Previously submitted for publication as AFHRL/MD TRM-29

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

GED Program
General Educational Development
High School Equivalency
Veteran's Post-Service Performance
Educational Credentials
Educational Programs

20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This study analyzes the benefits which accrue to servicemen who participate in and pass the GED equivalancy tests. Achievement of GED equivalency was found to result in tangible benefits for the individual, both while in the service and in civilian life. GED recipients attained higher pay grades than those who did not receive equivalency certification. In civilian life, GED recipients were more likely to be employed in higher paying, more prestigious occupations. Also, GED holders had higher mean weekly earnings than non-high school graduates without a GED. Receipt of an official state certificate was found to increase the level of benefits which the individual received in civilian life.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED
SECURITY CLASSIFICATION OF THIS PAGE (When Data En

14. KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
GED Program General Educational Development High School Equivalency Veteran's Post-Service Performance Educational Credentials Educational Programs						